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## Research Update

### Current Research Continues to Support Breastfeeding Benefits

Mary Lou Moore, PhD, RNC, LCCE, FACCE, FAAN

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MARY LOU MOORE is an Associate Professor in the Department of Obstetrics and Gynecology at the Wake Forest University School of Medicine in Winston-Salem, North Carolina.

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#### Abstract

Lamaze International and Lamaze Certified Childbirth Educators are strong supporters of breastfeeding. This paper reviews eight recent studies that are related to breastfeeding and useful to clinicians and educators.

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Lamaze International and Lamaze Certified Childbirth Educators are strong supporters of breastfeeding. The Lamaze International Teacher Education Program recommends that breastfeeding topics be discussed in more than one class in a childbirth education series. In this column, we present some recent research findings related to breastfeeding.

#### Influences on Breastfeeding Duration

The United States Health Resources and Services Administration and Centers for Disease Control have set a goal to have half of all newborns still breastfeeding at six months (U.S. Department of Health and Human Services, 2000). Several studies have focused on factors that may be related to the duration of breastfeeding. Ertem, Votto, and Leventhal (2001) studied 64 minority, low-income, single mothers in Connecticut and found that 70% had stopped breastfeeding after two months. More than 90% knew the benefits of breastfeeding. Almost none quit because the mother felt she was not producing enough milk. The mothers who quit early were less likely to believe they would breastfeed longer than two months

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and more likely to believe their infant preferred the bottle to their breast. The authors suggest that, in teaching about breastfeeding, an important focus should be placed upon enhancing a mother's confidence and changing beliefs about infant preferences.

### Labor Medication

In another study that measured breastfeeding duration, researchers examined the effect of intravenous and epidural pain medications in labor on both duration and neonatal sucking among a sample of 129 mothers (Riordan, Gross, Angeron, Krumwiede, & Melin, 2000). Using the Infant Breast Assessment Tool, the authors found that a statistically significant difference in sucking existed between those women with no medication and those with either intravenous or epidural medication ( $p = .001$ ). A statistically significant difference also existed between those women who had one type of medication and those who had both types of medication ( $p = .001$ ). No difference was found between groups in the duration of breastfeeding measured at six weeks postpartum.

### Postpartum Support

Porteous, Kaufman, and Rush (2000) conducted a randomized controlled trial in Toronto, randomly assigning 51 women to conventional postpartum nursing care or to individualized professional support that continued into the community. At four weeks postpartum, 68% of the women receiving conventional postpartum support continued to breastfeed, while 100% of the women receiving individualized support continued to breastfeed.

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### Complementary Feeding

In another study, Black, Siegel, Abel, and Bentley (2001) tested the efficacy of an intervention designed to delay the early introduction of complementary feeding other than breast milk or formula. The focus of the intervention was the reduction of cultural barriers in order to promote the delay of introducing solid foods until four to six months postbirth, as recommended by the American Academy of Pediatrics, the World Health Organization, and Women, Infants, and Children programs. The sample consisted of 181 first-time, low-income, African American mothers who were under 18 years old and lived in multigenerational families. The sample was randomized to an intervention that included a home visit every other week for a year by one of two college-educated African American women, who were also mothers. A video was presented during the first visit, along with a specific curriculum and training. Black and colleagues (2001) found that the mothers of infants in the intervention group were four times more likely to delay the introduction of complementary feeding. Beyond the findings of the current study, the intervention model described in this paper may potentially be adapted to other areas where cultural barriers prevent behavior change.

### Benefits of Breastfeeding

Another study examined one particular benefit of breastfeeding for a longer duration. Bener, Denic, and Galadari (2001) compared 117 children with acute lymphocytic leukemia or lymphoma with 117 healthy children. Those children who were breastfed for six months or less were 2.97 times more likely to develop a lymphoid malignancy than those children who were breastfed for more than six months. All of the children in this study were Bedouin Arabs, so replication of this

research in other populations is necessary before the findings can be generalized.

An additional advantage of breastfeeding was reported by Gillman et al. (2001). In a survey of 15,341 adolescents ages 9 to 14 (8,186 girls and 7,155 boys), the authors found that those who were fed predominantly breast milk in the first six months of life were 22% less likely to be overweight 9 to 14 years later. Moreover, adolescents who were breastfed for at least seven months were approximately 20% less likely to be overweight than those who were breastfed for three months or less. In suggesting that a long-term benefit of breastfeeding may be the prevention of overweight, the authors document yet another advantage.

### Dieting and Breastfeeding

In their study, Lovelady, Garner, Moreno, and Williams (2000) addressed the subjects of weight and breastfeeding. Traditionally, women have been told not to restrict calories while breastfeeding because of the possibility of reducing the production of milk. Lovelady, a North Carolina nutritionist, and her colleagues studied 40 women from four to 14 weeks postpartum who were approximately 20% overweight. Lovelady reduced their diet by 500 calories a day and placed them on a supervised exercise program in which they initially walked 15 minutes each day and gradually increased to 45 minutes each day. The researchers in this study found that a weight loss of one pound per week did not affect the growth of the babies (the women lost an average of 10.5 pounds over the 10-week period).

In a second study, Lovelady et al. (2001) examined whether or not women who were dieting and exercising had adequate levels of Vitamin B-6. Low levels of B-6 can affect growth and mental development in the baby and may play a role in depression in the mother. Eleven women with a 500-calorie restriction in their diets and 45 minutes of exercise per day were compared with 11

women who were not dieting and exercising. Both groups took the B-6 supplement. Both groups of women maintained healthy levels of B-6. Lovelady et al. (2001) recommended that women who are dieting and exercising should consider taking a B-6 supplement (2 mg/day), especially if they are not eating a diet rich in B-6. Foods rich in vitamin B-6 include fortified cereals, soybeans, wheat germ, tuna, salmon, and liver.

### Conclusion

The studies reviewed in this article provide answers to a number of issues that may be addressed by childbirth educators. Does pain medication affect early suckling? It did in the study by Riordan and her colleagues (2000). Can intervention make a difference? Porteous and colleagues (2000) found that an intervention extended the duration of breastfeeding, while Black and colleagues (2001) found that their intervention delayed the introduction of solids. To an already formidable list of breastfeeding benefits, we can cautiously add a decrease in certain cancers (pending replication in populations more similar to those we teach) and prevention of adolescent overweight. And, finally, can women participate in a carefully designed weight loss program while they breastfeed and, at the same time, not cause harm to their infants? Lovelady and her colleagues (2000, 2001) suggest that the answer is "yes."

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